



Part Number: **T20-52**

Revision 20190524 - Generated 2019-May-30



OD	(nom. - bare core) (max. - after coating)	5.08 mm 5.33 mm	0.200 in 0.210 in
ID	(nom. - bare core) (min. - after coating)	2.24 mm 1.98 mm	0.088 in 0.078 in
Ht	(nom. - bare core) (max. - after coating)	1.78 mm 2.03 mm	0.070 in 0.080 in
Mass	(approximate)	0.18 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.0230 cm ²	
	L _e - Eff. Mag. Path Length	1.15 cm	
	V _e - Eff. Core Volume	0.0260 cm ³	
	WA - Min. Eff. Window Area	0.0308 cm ²	
	sa - Surface Area	0.962 cm ²	
	mlt - mean length per turn	0.841 cm	
Inductance	μ _i (reference)	75	
	A _L value (nominal)	17.5 nH/N ²	
	Test Winding	N=50, #36 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.005 V	
A _L tolerance	±10%		
Core Loss	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B _{pk} expressed in gauss, f expressed in hertz, and: a=1.00E+09, b=1.10E+08, c=2.10E+06, d=6.90E-14		
	B _{pk}	140 G	
	frequency	100 kHz	
	Core Loss (nominal)	58 mW/cm ³	
Core Loss (maximum)	67 mW/cm ³		
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.00E-02, b=4.66E-06, c=1.84, d=0.00		
	H _{DC}	50 Oe	
	Percent Initial Perm(nom.)	61.6%	
Percent Initial Perm(min.)	53.4%		
Coating/Pkg	Coating Type:	Parylene C	
	Voltage Breakdown (min.)	500 Vrms, 60Hz	
	Limit	3 mA, 5 s	
	Package Quantity	100,000 Pcs/Box	

Winding Table	Wire Size	AWG	28	30	32	34	36	38	40	42	44	#N/A	#N/A
		mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	#N/A	#N/A
	Single Layer	Turns	12	16	20	26	33	42	52	66	83	#N/A	#N/A
		Rdc(Ω)	21.5 m	45.5 m	90.5 m	187.2 m	377.8 m	764.7 m	1.5	3.0	6.1	#N/A	#N/A
Full Winding	Turns	13	20	30	47	73	113	175	271	419	#N/A	#N/A	
	Rdc(Ω)	23.3 m	56.9 m	135.8 m	338.3 m	835.7 m	2.1	5.1	12.5	30.7	#N/A	#N/A	

